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Separate Implementation of Water and Land Reforms: a Lesson from Limpopo (South Africa)

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In South Africa (SA), with the advent of democracy, both land and water institutions have undergone, and are still undergoing, reform measures, especially to address equity and promote rural development. However, despite the apparent inter-linkages of land and water in rural livelihoods and agricultural development, the implementation of such reforms has been done separately. Field work conducted on the communal small scale irrigation schemes (SIS) of Nzhelele and Thabina highlighted not only the lack of coherence between the land and water reform programmes, but it also showed the implementation constraints of the programmes individually. Although articulating land reform to water reform seems necessary, the lack of effective implementation of water reform remains an obstacle, constraining rural livelihoods and agricultural development. In addition, for it to effectively address equity and promote rural development, it seems necessary for the water/land reforms to be linked to broader agrarian reforms, taking into consideration support services, market access and the overall rural, often multiple, livelihoods and strategies[3].

Introduction: separate water and land reforms in South Africa

As rural economies are mainly agrarian based, their development is linked to access to natural resources. Land and water form part of the most crucial of these natural resources. As land and water are finite and scarce resources, access to them needs to be regulated, particularly to achieve equity and sustainability.

Institutions, both formal and informal, are the basis by which local communities gain access and exert control on the use of resources such as land and water. In SA, both land and water institutions have undergone reforms with the advent of democracy, especially to address the racially motivated unequal access occasioned by segregatory colonial rule and apartheid. The democratic government of SA introduced the *Water Act No.36* in 1998, which mainly sought to achieve sustainability, efficiency and equity in water resources management (SA, 1998). For this to be done effectively, government has adopted the integrated water resources management (IWRM) framework, which emphasises the principles of decentralisation and user participation (DWAF, 2004) amongst others. The new legislation allows users, through Water User Associations (WUA), to participate in decision making by decentralising water management to catchment and local levels (Jaspers, 2001). On the land side, in the former homelands, government is dealing with insecure communal land tenure through the *Communal Land Rights Act (CLARA)* of 2004. Although CLARA is still to be implemented, it aims at creating institutions to better define and secure ownership and use of land (SA, 2004). This ownership can be on the communal, co-operative basis, or in the extreme case, might lead to individualised privatisation (Anseeuw, 2006).

Despite the apparent inter linkages of land and water in agrarian livelihoods and economies, the implementation of such reforms has been done separately. A study, made by the University of Pretoria, in the framework of the ARISE project[4], aimed at identifying the problems arising from the uncoordinated implementation of land and water reforms. The main objective was to analyse, through two empirical case-studies (Nzhelele and Thabina irrigation schemes in the Limpopo Province, South Africa), the potential contribution of land tenure reform on small holder irrigation on communal land, where water reform was already implemented.

Low production and productivity levels of irrigation farmers with multiple livelihoods

Communal areas have had a history of underutilisation of land (Kamara et al, 2002). Currently, there is fallow land in communal small scale irrigation schemes (SIS) even in cases where water is available. Given the possible change of land rights, will SIS farmers' access to water improve or worsen and,

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3 For more details regarding this work, see Saruchera (2011).

4 http://www.ceepa.co.za/arise.html

consequently, will the utilisation of plot land be improved or constrained?

Land is underutilised in both studied schemes. On average, only 64% of land is productive. In addition, land productivity is also low. Using the National Department of Agriculture (NDA) average yield estimates for irrigated crops as comparison, maize, the major crop in both SIS, is up to 70% below optimum, while for other crops such as vegetables, productivity is 50% below potential. Consequently, plot income is far below optimum in both schemes.

Major farm and household characteristics in Nzhelele and Thabina SIS:

- Elderly farming population: Average age was 63 years.
- Diverse portfolio of livelihood sources, namely employment, agriculture, remittances, independent activities and government welfare grants.
- Welfare grants are the major income sources, followed by agriculture and remittances.
- 62.5% of the households' income is from non agricultural sources. However, besides welfare, agriculture provides highest income.
- Land administration is under the traditional authority (permission to occupy (PTO) certificate), issued by the chief. Leasing of land is officially not allowed in both schemes, but in practise it does sometimes happen.
- Water reform has been implemented, but not effectively. Water reform has failed to improve water access and supply at SIS level. WUAs have been formed, but they are not operational. Water allocation is based on time, without payment for water use, nor water rights or licences. The schemes are run by government through extension officers.

When land tenure reform is implemented, it is expected that more effective land use will ensue, as land rights will allow farmers to privately hold, lease or sell land. More land, it is expected, will therefore be put under crops, increasing productivity and farm income (De Soto, 2000).

However, results have shown that land rights alone will not guarantee plot usage and productivity in these SIS. Two main reasons appear. The first relates to the present historical-institutional SIS setting: rights alone will not create a land market. Although the majority of farmers want land tenure reform, they seem to want the title deed more for protection from traditional authority than for production reasons. Farmers value land more as an insurance against poverty than as a productive asset (Denison and Manona, 2007). The creation of a land market through leasing and selling remains therefore uncertain after land reform. The second reason is the multiple sources of livelihood of communal SIS households. Alternative sources of income lead to a divergence of decision making patterns regarding agriculture. Agriculture's viability is presently too low (Kamara et al, 2002) and farming provides a too low proportion of household income for agricultural/livelihood decision-making processes - based on a large portfolio, within which agriculture is only a minor part - to be related to land or water determinants (Perret et al., 2005).

In addition, other factors will still hinder agricultural production after land reform, notably the cost of inputs and lack of credit, few market opportunities and poor access to irrigation water. First, since the majority of communal farmers are pensioners, they lack not only the physical capacity to manually till the land but also lack adequate income or access to credit to cover the costs for land preparation and input purchase[5]. As noted by Denison and Manona (2007), the cost of land preparation is so high that SIS farmers end up ploughing only part of their total land. Secondly, markets play an important role in productivity, income contribution and type of crops grown. The choice of crops is closely linked to market opportunities found in both schemes. Thabina is in a peri-urban area, and agriculture in this SIS is more market oriented. In the more rurally located Nzhelele farmers farm for consumption and only sell the surplus. The very limited local market share fails to give incentives to farmers. Consequently, their agricultural income is minimal. Lastly, despite water reform having been implemented, the farmers lack irrigation water. Inadequate water supply and lack of, or non-maintained, water infrastructure were identified by farmers as major constraints to farming. On the other hand, less than 15% of famers believe land scarcity is an issue while land tenure was not mentioned. So while shortage of land is a problem to some farmers, land rights related to their productive activities are clearly not an issue for most of them. However, the majority still refused to lease or sell their land should it be secured through formal and well-defined rights.

Joined water and land reforms, in the framework of an effective broader agrarian reform

The issue of the poor links between water and land rights is problematic, particularly in emerging and small scale irrigation farms. As such, under the new water law, only WUAs may apply for an irrigation water use license and may be granted the right to use non domestic water (SA, 1998). Linked to the privatisation and possible individualisation of land rights, failure to become a WUA member would limit individuals' right to use water (Perret, 2002). Also, through tenure reform, co-operatively managed communal land may

5 Ploughing is done by hired tractors, which have become too expensive for some farmers at ZAR750 per ha during the time of study. A 50kg bag of Ammonium Nitrate fertiliser was costing around ZAR330.

be transformed into scattered, individual plots if members opt for privatisation. This leads to communal water rights to be replaced by several individual private water rights. Where there are transfers of land rights, through the land market, there may also be a loss of water rights since water and land rights are hold separately. The new land owner must go through a separate process to acquire water rights.

However, this discussion is only useful when any of these reforms are effectively being implemented. Water reform has been implemented in the schemes, but not effectively. It seems water reform has failed to improve water access and supply at SIS level. While WUAs have been formed, they are not operational and, as a result, there is no change in the way water is accessed or used. There is no payment for water and there are no water rights or licences, a direct violation of Chapter 4 of the new Water Act, which stipulates that all productive water use should be licensed. The schemes are run by government through extension officers, not by the farmers, contrary to the principles of decentralised water management. Water allocation is also based on time, not quantity of water used, making it impossible to measure the actual amount of water used. Although water reform emphasises efficiency, these schemes are still using the wasteful flood irrigation method, which also damages soil structures and reduces yields (Postel, 2000).

The water reform implementation has been so ineffective that by the time of the study, 66% of respondents were not aware of water reform itself, nor of the existence of the WUA to which they belong. The reform is also set to take longer to establish because running the SIS on a cost recovery basis, as WUAs should do, is difficult. The current small plots do not yield enough cash income to cover water charges, maintenance and running costs. Given the farmers' average income, it is also unlikely that they will afford to self finance the schemes.

The failure of water reform is not surprising. Research has shown that new water institutions have largely been very ineffective and not beneficial to the previously disadvantaged (Swatuk, 2005). This is mainly due to a weak conceptualisation of new water policies. For example, the WUAs are designed from a legal and technical position alone. However, building a user group is more than just a technical application of rules and laws, but rather a political process of balancing different demands from different stakeholders (Manzungu, 2004). There seems to be a lack of such balance as there was no capacity building or adequate stakeholder consultation when the WUAs were established.

Water reform has not changed farmers' situation, as it was not effectively implemented, and immediate water needs still remain a major constraint. As such, as Cousins (2009) pointed out, land rights alone will be inadequate to address the situation. And neither will be water rights. There is obviously a need for a coordinated approach for land and water reform, especially given that water reform was attempted but land is still communally owned and the water rights have failed to take effect. However, there will be a limit to potential benefits of water and land reform, whether articulated or implemented separately or together, as the socio-economic set-ups of the farmers (overall livelihood insecurity, diverse livelihoods) are not farm based and as farming challenges such as market access, cost of inputs and access to credit have solutions that are outside the scope of land-water reforms.

To effectively address equity and promote rural development, intertwined water-land-reforms should be linked to broader agrarian reforms, considering support services, market access and the overall rural multiple livelihoods in SA. The restructuring of SIS farmers and of SA's smallholder farmers in general calls for an overall integrated reform of the agricultural and rural sectors.

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